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IN THE CLAIMS:

1. *(currently amended)* An optical fiber for supporting single mode transmission of a long wavelength signal, the optical fiber comprising:
 - a pure silica core region of diameter d ; and
 - a surrounding fluorine-doped cladding region having ~~an outer~~ a diameter D , where ~~$D/d > 8.5$~~ D/d is approximately 8.5.
2. *(original)* An optical fiber as defined in claim 1 wherein the fiber further comprises a surrounding tube layer.
3. *(currently amended)* An optical fiber as defined in claim 2 wherein the surrounding tube layer comprises silica a refractive index essentially identical to the refractive index of the pure silica core region.
4. *(original)* An optical fiber as defined in claim 1 wherein $9 < D/d < 10$.
5. *(currently amended)* A method of forming a single mode fiber for providing transmission of a long wavelength signal less than about 1700 nm, the method comprising the steps of:
 - a) providing a glass tube;
 - b) ~~using an MCVD a process to depositing~~ a plurality of layers of fluorine-doped silica on the inner wall of the glass tube, the plurality of layers selected to obtain a desired thickness diameter D for the a cladding layer;
 - c) depositing silica material on the inner wall of the deposited fluorine-doped silica, the amount of silica chosen to obtain a desired core diameter d ; and
 - d) collapsing the tube to form an optical fiber preform having a core region with a diameter d and a surrounding cladding layer having ~~an outer~~ a diameter D , where ~~$D/d > 8.5$~~ D/d is approximately 8.5.

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6. *(currently amended)* The method as defined in claim 5 wherein prior to depositing the plurality of layers of fluorine-doped material, a relatively few layers of phosphorous and fluorine-doped silica ~~is~~ are first deposited on the inside of the glass tube.

7. *(new)* The method as defined in claim 5 wherein prior to depositing the plurality of layers of fluorine-doped material, a relatively few layers of boron and fluorine-doped silica are first deposited on the inside of the glass tube.

8. *(new)* An optical fiber as defined in claim 1 wherein the D/d ratio is selected such that the ratio of the operating wavelength (λ_{op}) to the cutoff wavelength (λ_{cut}) is in the range of $1.0 < \lambda_{op}/\lambda_{cut} < 1.2$.

9. *(new)* An optical fiber as defined in claim 8 wherein the cutoff wavelength λ_{cut} is less than about 1700 nm.